

Based on

Working Limit State Conversion Factor
 Timber Capacity Factor - at groundline
 Steel Tube Capacity Factor
 Shaving Factor of timber
 Diameters based on a taper of
 Required Embedment
 Mpa Rating of tube AS 1163
 Min ultimate Tensile Strength of tube.

0.72
 0.72
 0.90
 0.85
 8
 10%
 350
 430

Cells require input value

mm per plus 1.0 m
 0.75 m

Green Timber Strength Group AS/ NZS 2878:2000			Seasoned Timber Strength Group AS/NZS 2878:2000		
S1	1	103	SD1	1	150
S2	2	86	SD2	2	130
S3	3	73	SD3	3	110
S4	4	62	SD4	4	94
S5	5	52	SD5	5	78
S6	6	43	SD6	6	65

Stub Sizes (mm)	250			300			350			400			450		
Yield stress Mpa	350	350	350	350	350	350	350	350	350	350	350	350	350	350	350
Wall Thickness mm	6.35	9.27	12.7	6.35	9.53	12.7	6.35	9.53	12.7	6.35	9.53	12.7	6.35	9.53	12.7
O.Dia mm	273	273	273	323.9	323.9	323.9	355.6	355.6	355.6	406.4	406.4	406.4	457	457	457
I.Dia mm	260.3	254.5	247.6	311.2	304.8	298.5	342.9	336.5	330.2	393.7	387.3	381.0	444.3	437.9	431.6
Timber in Tube (m)	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	1.2	1.2	1.2	1.2	1.2	1.2
Nominal Tube Size	250	250	250	300	300	300	350	350	350	400	400	400	450	450	450
Tube kN rating	121.34	171.50	226.17	172.71	251.62	325.51	209.27	305.69	396.53	275.17	403.34	524.97	349.78	514.04	670.82
Wall Thickness mm	6.35	9.27	12.7	6.35	9.53	12.7	6.35	9.53	12.7	6.35	9.53	12.7	6.35	9.53	12.7

Overall or Required Pole Length (m)	Required Tip Strength (kN)	Timber Strength Group	Depth of embedment (m)	Required Bending Moment Capacity of pole	Required Bending Moment Capacity of Steel tube at interface	Timber/Concrete Interface Above Groundline (m)	Top of Sleeve Above Groundline (m)	Measured Pole Diameter, Top of sleeve at narrowest point (mm)	Nominal Stub Size	Total Length of Remaining Timber (m)	Required Stub Length (m)	External Diameter	Wall Thickness	Internal Diameter	REBUTTED TIMBER Including Limit State Conversion, Timber Capacity & Shaving Factor. (kN) (Seasoned)	REBUTTED TIMBER Including Limit State Conversion, Timber Capacity & Shaving Factor. (kN) (Green)	Steel Tube at Interface, Including Limit State Conversion & Steel Capacity Factor. (yield stress kN)	Steel Tube at Interface, Including Limit State Conversion & Steel Capacity Factor. (min ultimate tensile kN)
14.00	12	2	2.15	142.2	145.3	0.95	1.85	320		10.90	4.00	323.9	6.35	311.2	23.5	15.57	19.8	24.3
15.00	8	2	2.25	102.0	105.8	0.85	1.75	335	300	11.90	4.00	323.9	6.35	311.2	21.4	14.16	18.1	22.3
15.00	12	2	2.25	153.0	158.7	0.85	1.75	335	300	11.90	4.00	323.9	6.35	311.2	21.4	14.16	18.1	22.3
15.00	20	2	2.25	255.0	261.1	1.00	2.20	390	400	11.75	4.45	406.4	6.35	393.7	45.2	29.89	29.3	36.0
17.00	8	2	2.45	116.4	123.6	0.65	1.55	335	300	13.90	4.00	323.9	6.35	311.2	18.1	11.98	15.5	19.1
17.00	12	2	2.45	174.6	185.3	0.65	1.55	360	350	13.90	4.00	355.6	6.35	342.9	24.2	16.03	18.8	23.1
17.00	20	2	2.45	291.0	305.6	0.80	2.00	390	400	13.75	4.45	406.4	9.53	387.3	36.2	23.93	36.7	45.0
18.00	12	2	2.55	185.4	192.7	1.00	1.90	360	350	14.45	4.45	355.6	6.35	342.9	23.2	15.37	18.1	22.2
21.00	12	2	2.85	217.8	226.7	1.15	2.35	390	400	17.00	5.20	406.4	6.35	393.7	30.2	19.96	20.2	24.8
21.00	20	2	2.85	363.0	377.8	1.15	2.35	455	450	17.00	5.20	457	9.53	437.9	41.5	27.47	37.8	46.4